I hope that B may give some measure of *absorption*, and A—B some measure of *dew*.

I reckon grammes of weight gained as cubic centimetres of water, divide this number by the number of sq. cm. in the circular opening, and take the quotient thus obtained as the measure in linear cm. of dew as rain.

I shall be greatly obliged if any readers can refer me to previous experiments that have been made in this direction.

Harpenden. T. WILSON.

Oat Smut as an Artist's Pigment.

WITH regard to Prof. Marshall Ward's note under this heading (p. 389, *ante*), I may add that, according to Mr. K. Miyabe, the olive-brown spores of *Ustilago esculenta* ("Makomo-zumi" in Japanese), besides its application to the painting of the ladies' eyebrows in Japan, are mixed up with oil and smeared on the scalp and hairs by older women who have the hairs thin or grey. "At present," the author adds, "the spores are largely used in the lacquer industry to produce rusty-coloured wares by mixing them with lac" (*The Botanical Magazine*, Tôkyô, vol. ix. p. 197, May 1895).

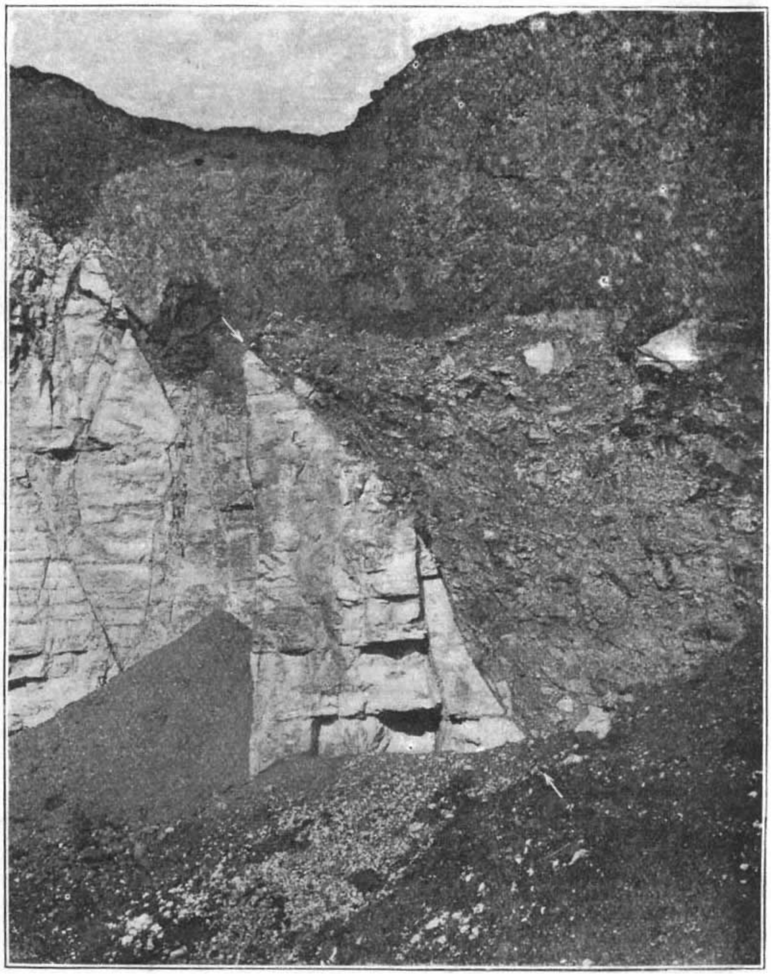
KUMAGUSU MINAKATA.

February 25.

GEOLOGICAL PHOTOGRAPHS.

THE Committee appointed by the British Association for the collection and safeguarding of photographs of geological interest has a good record of work to show for the past year. The entire collection of 1750 prints is now uniformly mounted and deposited in the library of the Museum of Practical Geology at Jermyn Street. Over 350 new prints were received during last year. A new feature has been the formation of a collection of picked duplicates illustrating typical geological phenomena which, in the form of prints or lantern slides, can be lent to local scientific societies or others desiring either to know what work the Committee is doing, or to help on the work.

No less than 119 of the new photographs come from Ireland, and the north of that country is now well illustrated. As is well known, the geology of this region is exceptionally interesting as it was the site of a great volcanic outburst in Tertiary times, and the columnar lavas and sills, the dykes intrusive into chalk and into newer and older rocks, the laccolites, volcanic necks and ash beds, form a text-book of volcanic geology. One of the most remarkable localities is Cave Hill, near Belfast, where the unconformable junction of the chalk with the lavas has been well exposed by the quarrying operations.



Photographed by Mr. R. Welch, Belfast.] [*Copyright.*

FIG. 1.—Cave Hill, Belfast.

The remarkable section shown in the annexed figure (Fig. 1) is reproduced from an excellent photograph by Mr. R. Welch, of Belfast. Unfortunately the section is now being destroyed by quarrying, so that this photograph is the best record we possess of it. It shows an old, steep, pre-Tertiary cliff of chalk which was gradually buried in débris, most of which was derived from itself. Both cliff and débris were buried by basaltic lavas and ash beds thrown out by the volcanoes which broke out along great fissures in early Eocene times.

Glacial phenomena admit admirably of registration by photography, and the collection is fairly rich in such illustrations.

Although Ramsay many years ago wrote an account of the glaciation of North Wales, comparatively little connected work has been since done to elucidate this remarkable example of upland glaciation, while a complete photographic record of it remains to be executed. Some few points have, however, been dealt with, notably by the late J. J. Cole, Messrs. Williamson and Wills, Mr. Godfrey Bingley, Mr. Atchison and others, and the work is in the collection. Good as it is, however, serves best to show how much in the way of systematic recording there is still left to be done. Some one should set to work with Ramsay's book in his hand, visit the localities mentioned, photograph them, and, guided by it, seek out and record a complete account of the glaciation of the entire region; and he cannot do better than begin on Snowdon. Just opposite Snowdon, on a small hill, Y Foel Perfedd, above Pen-y Pass Hotel, the perched block shown in Mr. Bingley's photograph (Fig. 2), of which a reproduction is annexed, overhangs the Pass of

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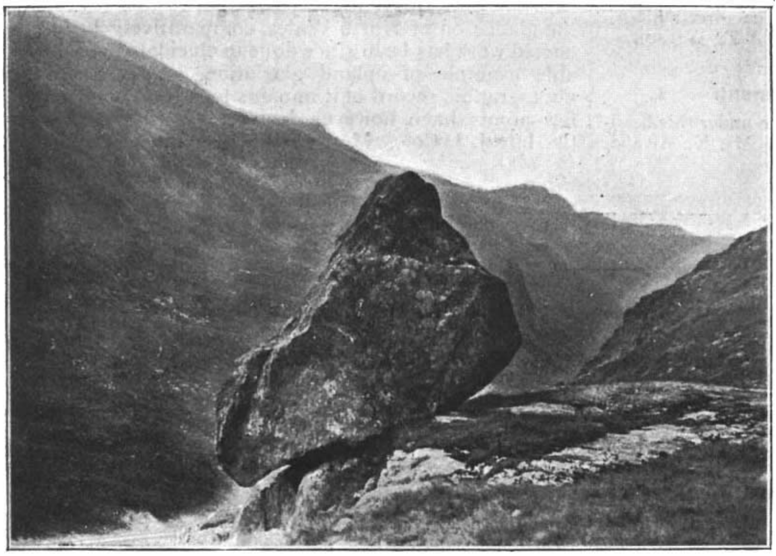
Llanberis, and looks as if a mere touch would precipitate it into the Pass below.

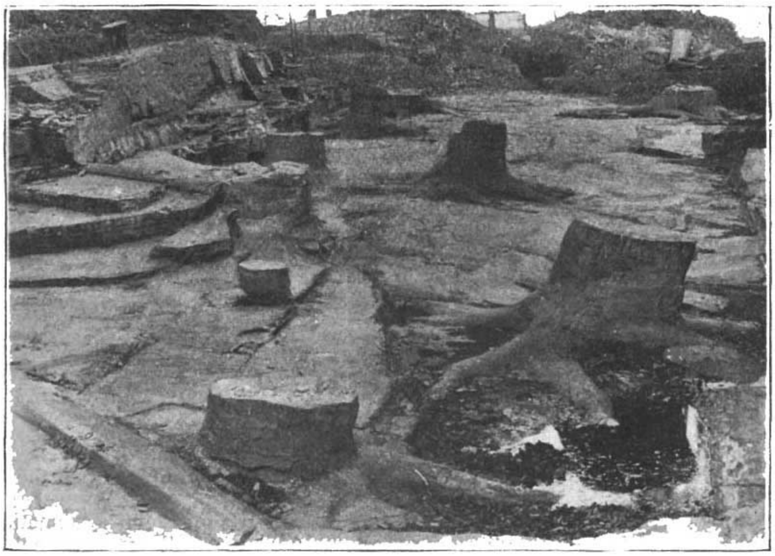
Photographs have often been taken of single examples of fossil trees in submerged forests and in the coal-measures or other rocks. But it is not often that a whole forest of Carboniferous trees is exposed to-day in quarrying operations, and it is still more rare to have them preserved for future generations by a building, as has been done in the instance from Partick, figured below. This photograph was taken by Mr. R. McF. Mure, of Paisley, who has kindly furnished me with particulars as to the size of the trees: the stems are most of them over two feet in diameter at the base, and the spread of the roots in some cases is correspondingly large.

W. W. WATTS.



Photographed by Mr. G. Bingley, Headingley, Leeds] [*Copyright.*

FIG. 2.—Y Foel, Perfedd, Llanberis.



Photographed by Mr. R. McF. Mure, Paisley.] [*Copyright.*

FIG. 3.—Carboniferous Forest, Partick, Glasgow.

SOME RARE BIRDS' EGGS.

ON comparing the numerous works which have appeared of late years on British birds with their predecessors of a couple of decades or more ago, we cannot fail to be struck with the great diminution in the number of species whose eggs and nests are stated to be unknown. And since the appearance of even the more recent of these, one more gap has been filled up by the announcement of the discovery by Mr. Popham, last July, on an island in the mouth of the Yenisei, of the long-sought eggs of the curlew-sandpiper (*Tringa subarquata*). By this fortunate discovery the number of species entitled, even by the utmost stretch of courtesy, to be included in the British list whose eggs still remain unknown, is very small indeed, although there are several species of which the known specimens are extremely few. Of course there are a host of foreign birds whose nidification awaits discovery, but to mention even a portion of these would obviously be impossible within the limits of an ordinary article. The majority of the British species whose breeding haunts offered the longest resistance to the efforts of egg-hunters, were those which migrate at this season to the desolate Arctic tundras; and among the eager explorers of the avifauna of those regions the name of John Wolley will always stand pre-eminent, ably as his pioneer efforts have been seconded and completed by men of the stamp of the late Mr. H. Seebohm and Colonel Feilden, to say nothing of many equally enthusiastic and capable observers. At the present day one of the great fields remaining for exploration are the breeding areas of many of the species inhabiting the southern hemisphere.

In many respects birds' eggs have proved a somewhat disappointing study, since, if we except their aid in bringing about the recognition of the intimate structural affinities existing between the Limicolæ and the Gaviæ, they have afforded comparatively little assistance in unravelling the tangled skein of avian relationships. And many of the generalisations which have been drawn from them, such as those relating to white eggs, have turned out to be true only in part. Moreover, it is unlikely that those remaining to be discovered will add anything really important to our stock of knowledge. The newly-discovered eggs of the curlew-sandpiper, for example, do not differ from those of the allied forms in any more important degree than do the different postage-stamps of the same issue.

Not that the quest of birds' eggs is in any way to be discouraged—far from it. While the eggs themselves, from the intrinsic beauty of their shape and coloration, form a never-ending source of delight to the collector, it is only through the energy of the hunter after these spoils that a knowledge of the habits of the birds themselves can ever be attained. In the words of Prof. A. Newton, it is the field naturalist who alone crowns the

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